Datasheet ON3900

- Optimal communication unit for vehicles
- High computing power for higher speeds and greater bandwidths
- Latest mobile standards 5G Rel.16 and Wi-Fi 7
- Extensive SD-WAN functionalities: VPN, QoS
- Intelligent link bundling for seamless train-to-ground connections
- Integrated hypervisor for edge computing applications (VMs, containers)
- Cybersecurity protection: network zoning, firewalls, encryption
- Versatile vehicle interfaces (CAN, IBIS, ITxPT, Digital I/O)
- Sensor-to-cloud data transmission
- High-quality, compact hardware design with flexible mounting options
- "Zero Touch" deployment ex factory
- Centralized fleet management

Applications

- Passenger Wi-Fi
- Condition monitoring
- Passenger information systems
- Driver communication
- CCTV
- Remote maintenance
- Payment systems

Features

- Up to 4 x 5G interfaces
- 2 x 5G and 2 x Wi-Fi 7
- 3 x 2.5 Gbps Ethernet, Push-Pull M12
- VLAN, VRF, Firewall, IPsec
- 8 SIM card slots, eSIM
- High-precision GNSS
- Optional SSD up to X TB
- CE, EN 50155, EN 45545, EMC 06
- Cybersecurity: IEC 62443-4-2
- Ignition voltage detection

Technical specifications OM3900

Dimensions (W x H x D): 260 x 66 x 175 mm
Operating Temperature: -40 °C to +70 °C
Ingress Protection Level: IP40

Port Type and Quantity Options
3 x 2.5 GbE, push-pull M12 X-Coded

Radio-Freqency Modules
Up to 4 Cellular / WiFi Modules with 4x4 MIMO, e.g.
4 x 5G-NR / LTE-A
2 x 5G-NR / LTE-A and 2 x WiFi 7
5G Release 16 / WiFi7 Access Point, Client and Mesh modes
8 x SIM-Card slots (Nano Sim, push-push tray) on two easy handable SIM-drawers
Optional: Easy handable SIM-tray, as Option with 8 x SIM-Card holder (Nano SIM, push-push tray)

Positioning
Built-in Standard-precision GNSS receiver
Optional: GNSS Receiver with DR (Dead reckoning)
Hi-Precision GNSS Receiver with DR (Dead reckoning) and RTK (Real-Time Kinematic)

CPU
Quad Core Cortex A72 64-bit @ 1.6 GHz,
4 GB RAM (DDR4), 8 GB Flash

Antennas
16 (Cellular / WiFi) +1 (GNSS) FAKRA Type RF Connectors
Optional: 16 (Cellular / WiFi) +1 (GNSS) QLS Type RF Connectors

Power Supply
24 – 110 VDC (+/- 30 %) Power Input

Interfaces
1x USB-C Host Port, 1x USB-C Device Port, LED (RGB)

Real Time Clock (RTC)
Buffered 48 h

Extension Options
2 x Extension Slots (10 pin terminal block) to host options like CAN-FD / RS-485 / RS-232 / DIO

Storage Options
Storage NVMe M.2 SSD, starting from 128 GB and up to X TB

Environmental
Normal high above sea level, 2000 m and up to 4000 m with temperature derating

Compliance
CE, FCC, UL 62368, PTCRB (US-Provider Certification will follow)
Country approvals at product launch Europe, USA, Canada, Australia/New Zealand
EN 50155, EN 45545, EBA EMV 06

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